

Hawker and Grieve Saved In Mid-Ocean

Continued from preceding page

carriage snapped on the Martinsyde plane and Major Morgan and Captain Bayham were injured. Hawker maneuvered in circles until he had attained the desired height, then he headed at tremendous speed for the city of St. John's. The machine passed directly over the city and quickly disappeared from view.

Landing Carriage Dropped

Just after passing the Quiddivide aerodrome, where Raynham and Morgan were stationed, Hawker released the landing carriage of his machine, which dropped into the sea. He hoped this to lighten his load and accelerate his speed.

Although the winds and air pressure were not all that could be hoped for, Hawker and Grieve gravely considered the hazards of the attempt and decided to stake everything in an effort to "beat the Americans." They ordered their handkerchiefs packed, and Hawker and Grieve sat in the cockpit, somewhat nervously, awaiting the start. They would not dispense with his pajamas on the trip.

The night before their start, Hawker and Grieve mapped out their course, the first Newfoundland-Ireland air course ever laid down. As soon as he had finished breakfast the next morning, Hawker consulted the weather experts at the Royal Air Force Meteorological Bureau.

They Climb Into 'Plane

Methodically and without any trace of nervousness, Hawker and Grieve climbed into their biplane. Hawker gave the motor a spin, then opened the throttle to the full, so that the ground crew had to call for assistance in holding the plane. Hawker bade the men farewell, then gave the word to "hook out the supporting blocks."

Hawker and Grieve, to their rival, Bayham, was that he would meet him at Rocklands, England. Wireless sent word of Bayham's mishap to Hawker who was at sea.

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Grieve Expected Results

Commander Grieve expected to make important observations concerning the winds. He intended to use a sextant during the day and operate by the North Star at night. If thick weather obscured the sky he intended to use the clouds for calculations.

The start of the aviators was witnessed by not more than sixty persons, competitors, aviators and newspaper men.

Concentrated rations were carried on the voyage and the fuel was 340 gallons of gasoline. When Hawker and Grieve took their places in the fuselage of the airplane they were incased in full length non-inflammable suits. They also had ingeniously constructed lifeboats, which formed part of the fitting of the fuselage and was their only hope for immediate safety in case of accident.

The boat was equipped with provisions and signalling devices. Hawker had arranged to release and drop the boat by means of an automatic device controlled by a button near the pilot's seat. The plane had nothing which would keep it aloft.

Expected 100-Mile Average

Hawker expected to average a speed of 100 miles an hour. "The Daily Mail" prize conditions call for a complete flight within seventy-two hours, and, if compelled to land, a start from the water unaided.

Commander Grieve expressed the intention to fly straight out to sea for 600 miles, then to follow the transatlantic steamship lane. The aviators expected to fly at an altitude of 8,000 feet, but said that atmospheric conditions would determine this.

When "The Daily Mail" offered a prize of \$50,000 for a transatlantic flight Hawker set out to win it. He had a Sopwith two-passenger biplane built hurriedly and secretly, and he shipped it from London on March 17, following it to St. John's a few days later.

Many Had Refused to Believe Hawker Lost

Experienced aviators saw advantages in daring flight, says Tudor.

By Harry E. Tudor

Director, Air Pilots' Bureau

There has all along been a belief that Hawker and Grieve were still alive despite the fact that the time allotted for the flight was exceeded. The reports of incoming steamers, however, that the Sopwith had probably struck a cyclone shook the faith in this belief.

The general opinion was that Hawker's abandoning his landing carriage necessitated crashing to the ground, but he would have found it possible to land in shallow water off the Irish coast. The absence of pontoons was considered to mean sure death, but, as a matter of fact, the rapid consumption of his fuel could only add buoyancy to the plane, and the partly emptied gas tanks and oil containers would have provided admirable pontoons.

Hawker was no young enthusiast or "dare devil" without responsibilities. He was a cool-headed test pilot, who had undertaken risks in trying out untried machines for years. He had as much to live for as any man—perhaps more in his attachment to his wife and baby.

Tom Sopwith, one of the earliest pioneers of the aircraft industry, knew precisely what he was designing a plane for, and so far as the engine is concerned one may say that that part of the machine's equipment had been submitted to far greater tests than the actual flight exacted from it.

The Atlantic flight is really no test, but merely an anticipated demonstration of motive power already tested. Sopwith entered the contest for transatlantic flying honors without relying upon guess work, as did Hawker. The possibility of having to descend in mid-ocean was not lost sight of, and the real risk was of the character experienced by the crew of an abandoned vessel on "taking to the lifeboats." No aviators regard the flight as "daring," and all would assert that the risks are nothing compared with the risks the Air Service Corps took during the war.

'Plane Struck Water

In Mid-Atlantic Above Telegraph Plateau

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The point where Harry C. Hawker and Commander Grieve were rescued after their plane had been forced to

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THEY FELT HE WOULD BE SAVED



Mrs. Harry Hawker and baby. Mrs. Hawker was positive all along that her husband's daring and resourcefulness would save his life.

Future 'Planes To Fly Above Storm Limit

Samuel D. Mott Declares Possibilities of Commercial Aviation Lie Six Miles Above the Earth

Believes Idea Feasible

Altitude of 15 or 20 Miles Is Merely a Matter of Equipment, He Contends

ATLANTIC CITY, May 25.—The future of commercial aviation is six miles above the earth's surface. The birdmen must get above the storm limit and weather must be eliminated from the commercial aerial log. The antithesis of the submarine will accomplish the achievement.

These were the salient points of an address here to-night before the second Pan-American Aeronautic Convention by Samuel D. Mott, charter member of the Aero Club of America, who has just completed a special study of aeronautics with the view of future attainment.

"We have read of many men tarrying at Newfoundland for several weeks waiting for the weather. That trial was a glorious undertaking, our navy's preparations were widely made, and all honor the brave men attempting the test. But I submit that waiting indefinitely for ideal weather conditions for long-distance flying over land or sea will not do for the demands of commerce. Therefore, the process of reasoning that John Philip Holland applied to boats to sink beneath the still waters of the ocean, I conceive and would bring to your attention the possibilities of the antithesis of the submarine, the altitude 'plane or alti-plane, as distinguished from the airplane or hydroplane, to go into the stillness of nature above the weather.

A Problem of Equipment

"The problem is evidently one of equipment of our 'planes to function in rarefied air, and protection of navigators against its tenacity; likewise protection of their body warmth and comfort in extremes of temperature. How high we may go no one may know until tested. Personally I believe it possible to go fifteen or twenty miles aloft, if necessary. It is obviously a matter of equipment plus climbing ability of aircraft designed for the purpose.

"What is the object of high flying? Daily experience shows us that high speed and density are incompatible. We know the surface speed of submarines is about half that of battleships; submerged, it is less, and the greater the depth still less the speed. "Again we know that we furnish aircraft with four times the power to go twice as fast, and the marine engineer knows that he must furnish eight times the power to go twice as fast. In other words, from the ultimate height of the air to the earth's core pressure is progressive. Thirty feet of the ground, the ocean's surface the pressure doubles. For every 1,000 feet ascent the pressure diminishes roughly one-half pound per square inch. The pressure two miles high is 9.8 pounds per square inch; at one mile high, 10.8; at three-quarters of a mile, 12.0; one-half mile, 13.2; one-quarter mile, 14.2; and at sea level, 14.7 pounds, or in round numbers, 15 pounds per square inch.

Storm Limit Discussed

"Where is the storm limit? As moisture and varying temperature are the fundamentals of storms, their greatest development is near the surface and wholly confined to the storm limit. Wind strata are of varying temperature. Over the hottest regions of Africa zero conditions have been detected within 10,000 feet of the ground. "Why must there be a storm limit? Because storms and hurricanes do not exist without moisture and heat, and air must have a certain density to hold the moisture due to evaporation. Hence there can be little or no wind above the storm limit.

"The unknown factor in the high altitude problem is this: Will an altitude in one-fifth density (eight miles high), with equal push, go five times faster or one-fifth faster? The rest is a matter of simple equipment and good construction. In either case the gain is substantial. If the former were true a voyage to New York and London could be made in about three hours by going eight miles high, if the latter is true the same voyage can be made in about twelve hours running time, assuming a surface speed of 200 miles an hour, which is practically a question of power.

Engine Weight Reduced

"In the exhibition in aeronautical hall is an engine which explains why we are flying to-day and why we will fly faster to-morrow. It is a 100 H. P. Curtiss engine weighing 157 pounds per H. P. and has driven an airplane 160 miles an hour.

"To my mind it is plain that the high altitudes will be determining factors in long distance flying. Greater speed, greater distance, more comfort and less danger in the quiet environment, less danger because when we double the time to do a risky thing we double the risk incurred; less gasoline, less weight and expense, for if environment permits us to go 100 miles with twice the fuel we formerly used to go twenty-five miles our economic gain is obviously 100 per cent, because we may then go 100 miles with the amount of fuel we formerly consumed to go fifty miles."

Posthumous honors for the 123 officers and enlisted men attached to the marine aviation force and United States naval officers of the aviation corps who lost their lives in the service of their country during the war were awarded here to-day by the convention at impressive services on the Steel Pier.

Vimy Cross-Sea Flight

Entry Is Being Assembled

ST. JOHN'S, N. F., May 25.—Unloading the parts of the Vimy bomber, which is to attempt the transatlantic flight, virtually was completed to-day. Captain "Jack" Alcock, pilot of the Vimy entry, said he expected to have his twin-engine 'plane ready to fly

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Air Service Recruits Go to Camp by 'Plane

SPRINGFIELD, Mass., May 24.—Officers in charge of army recruiting headquarters here announced to-day that, beginning next week, all air service recruits from this district will be taken by airplane from Stamford, Conn., to Haverhurst Field, Mineola, Long Island. This is said to be the first recruiting list in the country to arrange for such service.

before the Handley-Page, which has been two weeks under assembly at Harbor Grace.

The Vimy will be assembled at Quiddivide field, Raynham having offered the use of his airfield for that purpose.

U. S. Aerial Mail Pilot Plunges to Death From His Blazing Airplane

CLEVELAND, May 25.—Hundreds of persons saw Frank McCusker, of New York, pilot of a mail airplane, leap 200 feet to his death from a burning machine here to-day. Fifteen minutes before he had announced that he would attempt to establish a record on his flight to Chicago.

The cause of the accident is not known. Witnesses saw puffs of black smoke come from the rear of the De Havilland. When the machine was at a height of between 300 and 400 feet McCusker was seen to climb from his seat to the frame. Then the airplane plunged and the pilot was seen to leap. The empty machine flew forward 200 yards before it plunged to the ground.

McCusker was alive when picked up. He died in a police patrol while being taken to a hospital. His skull was fractured and his neck broken.

McCusker was formerly in the British naval flying corps, inspector of the De Havilland airplanes at Elizabeth, N. J., and instructor at the U. S. Aviation Field in Texas. His is said to be the first fatality since the inauguration of the government airplane mail service.

Roget Broke 1,350 Mile Record Set by German Lieut. Boehm

In his non-stop flight of 1,361 miles from Paris to Morocco Lieutenant Roget, the French aviator, smashed the world's record of 1,350 miles set by the German aviator Lieutenant Boehm in June, 1914, when, in his German army standard Albatross machine, remained aloft 24 hours and 12 minutes.

The nearest previous approach to this record was made on April 25, this year, by Lieutenant Commander H. B. Grow, of the United States Navy, in a twin-engine F-5-L flying boat off Hampton Roads. Commander Grow remained in the air 20 hours and 20 minutes, covering a total distance of 1,250 miles.

Lieutenant Commander A. C. Read's flight from Newfoundland to the Azores in the United States Navy seaplane NC-4, covered 1,211 miles, and this mark was passed by Harry G. Hawker, the Australian flyer, who reached Scotland yesterday, after having covered approximately 1,225 miles.

Three New Landing Fields Are Chosen

The American Flying Club, 11 East Thirty-eighth Street, announced last night that it had succeeded in getting three new landing fields in its efforts to help the government provide stop-off places for aviators engaged in cross-country flights. One of the fields is at Gedney Farms and is equipped with a hangar. The privilege of landing has been obtained at Manassas. Other towns that can provide level strips for landing and taking off are invited to cooperate with the government through the American Flying Club.

W

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Canadian "Ace" Lauds NC-4's Flight to Azores

HALIFAX, N. S., May 25.—Colonel William G. Barker, winner of the Victoria Cross and one of Canada's greatest airmen, arrived to-day on the steamer Aquitania from Southampton. He is credited with bringing down fifty-one German airplanes and made flights across the English Channel with the Prince of Wales.

Colonel Barker believes the Atlantic can be crossed in a single flight and that it will be done this year.

"The performance of the Americans in flying from Rockaway to the Azores was splendid," he said, "and I believe the NC-4 will fly from the Azores to Portugal. It was a great victory for the Liberty engines."

'Plane Proposed as Aid To Latin American Trade

WASHINGTON, May 25.—Aviation as an aid to Pan-American commerce will be one of the features on the program of the second Pan-American commercial conference, to be held here June 2 to 6. The possibility of this latest method of transportation in the development of trade between the United States and Latin America is one of the topics which will be discussed by the commercial experts who will be present at the gathering. Plans are being considered for a special exhibition flight over the Washington Monument grounds, adjoining the Pan-American Building, for the benefit of the conference on the day aviation transportation is under discussion.

Shipping and transportation, financing trade and the future of Latin American investments, loans and bonds, trading methods for exports and imports, parcel post, patents and trademarks, trade and travel regulations, engineering, educational aids to commerce—these and other phases of commercial intercourse will be taken up by experts. Telegrams have been sent by Director General Barrett of the Pan-American Union to the governors, requesting them to send representatives, who will report back to the business interests of the states on the possibilities of future trade relations with Latin America.

Plans were practically completed to-day for the opening of the big conference, at which the United States and every other republic of North and South America will be represented.

Industrial Board Saved, \$1,000,000 on Rails

WASHINGTON, May 25.—George N. Peek, chairman of the recently dissolved Industrial Board of the Department of Commerce, to-day fired back at Director General of Railroads Hines, who, in announcing that he had been compelled to contest for 200,000 tons of rails at the Industrial Board's figures, said he did so under protest.

Replying to the director general's statement that the \$47 price was unreasonable, Mr. Peek said it had saved \$1,000,000, as the rate was \$5 lower than the price the railroad administration was able to get in independent negotiations with the steel companies.

If the director general wishes to be fair, Mr. Peek indicated, he should have taken the pre-war rail price of \$30 as a basis for his calculations. Adding the increase in the cost of direct labor alone, approximately \$20, would have made the post-war price \$50. Mr. Peek called attention to the fact that since the signing of the armistice there have been reductions in steel prices of from 15 to 25 per cent.

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Italians Celebrate Without Demonstrations

ROME, May 25.—The fourth anniversary of the entrance of Italy into the war was celebrated yesterday without demonstrations. Public buildings were profusely decorated, but public gatherings were discouraged by the government. Captain Gabriele d'Annunzio was to have delivered an address, but the meeting was not held, at the request of the government, which did not wish a demonstration against the suspended action of the peace conference.

King Victor Emmanuel, in a proclamation, recalled the heroic exploits of the armed forces. Prince Colonna, Mayor of Rome, in a proclamation, asked the people to be firm in their patriotism and faith in the future.

Cuba Depots Strikers Fourteen Are Placed Aboard Liner for Spain

HAVANA, May 25.—The general strike, which went into effect late Saturday night in protest against the arrest and deportation of union men, effected but little change in the regular Sunday aspect of the city.

Fourteen of the men who were recently arrested, charged with being strike agitators, were placed on board the Spanish liner Infanta Isabel, which will depart for Spain to-night. All of them are Spaniards.

The arrests of alleged strike agitators continue. It is said to be the intention of the authorities to place in jail all members of the strike committees. The presidents of the taxi chauffeurs', cigarmakers' and waiters' unions are in Cabanas prison.

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